

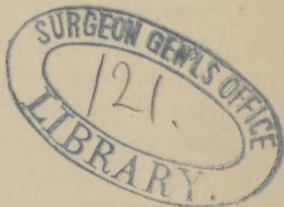
Johnson (R. W.) *With Author's Compliment*

# CRYPTORCHIDISM.

WITH AN ILLUSTRATIVE CASE.

BY

ROBERT W. JOHNSON, M. D. ✓



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# CRYPTORCHIDISM.

WITH AN ILLUSTRATION OF A

FIGURE BY J. H. B. B. B.



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## CRYPTORCHIDISM.

WITH AN ILLUSTRATIVE CASE.

BY ROBERT W. JOHNSON, M. D.

The testicles perform so important a service in directing the formation of the male—his habits, instincts, and ambitions, his vices and his virtues, from the womb to the grave, that they may not inaptly be compared to the weights of the clock, whose function it is to regulate its going, striking, and entire usefulness.

With man or time-piece these essentials must be in working order or the machine runs down. So close is the connection between a lesion of the generative tract and mental anxiety that one does not need a long professional life to find that the old surgical axiom—"Nearer the body the greater the danger"—has a corollary which can be translated, the nearer the pubis the dearer the part. In fact, as I shall instance later, the least variation from the normal standard fastens such a lens on the mental eye of the deformed that he sees only his deformity, and that, too, magnified out of all reason.

It is not surprising, therefore, to find that the Ancients, among whom there was probably as great a demand for theories as there is now, had some peculiar notions about the testicles. For instance, one testicle was supposed to beget males; the other had the more æsthetic function of engendering woman. What was done by the third, in those rare cases of supernumerary testicles, I am unable to state.

When one appreciates the vicissitudes of the descent of the testicle, the chance for a band of lymph to stop the way, or an inaccuracy existing between the size of the rings and the testicle which has to pass them, a faltering on the part of the gubernaculum



culum, or a mistep in the cremaster, I say when we weigh all these adverse odds we might be more surprised at finding the testicles in the scrotum than we are at their arrest in transitu.

For the sake of clearness, I must now define the abnormalities of position.

First, we have supernumerary testicle, with which we have nothing to do.

Second, the class of monorchids, or persons having only one testicle in the scrotum, the other lodged in the abdomen, inguinal canal, perineum or thigh. Provided there is one healthy testicle in the scrotum, of course these persons can reproduce and will not demand our attention.

The third class, much more rare are cryptorchids, or those who have *no* testicle in the scrotum. These may be subdivided into those who have no testicles, or anorchids, those whose testicles are both in the abdominal cavity, or inguinal canals, and finally, those who are a mixture of the latter classes, *i.e.*, having one testicle in the abdomen and one in the canal.

Marshall states that monorchids occur once in eight hundred examinations, and that he found but one cryptorchid in twelve thousand recruits. Hunter saw it but once or twice in his long surgical experience, and even such observers as Ernest Godard, who have made the subject a specialty, are able to collect, from personal observation, a paltry half dozen or more thus deformed, though the literature of the subject is prolific, and, in most cases, I regret to say, not very exact, such important elements as the examination of the seminal fluid being frequently omitted.

The empty scrotum has been found to exercise a marked influence on the general appearance of some cryptorchids. They are frequently described as effeminate, having a shrill voice, beardless or downy face, a restless eye, in fact, just on the border-land of hemaphrodism. Others are hypersensitive, and in the celebrated case of Sir Astley Cooper's apprentice, his deformity preyed so on his mind that he committed suicide. It must not be thought that all cryptorchids are thus stigmatized in appearance and manner. Many, unless confessing their condition, would pass as ordinary or even well-formed men, and

among the curious histories of some is the fact that their wives never suspected their husband's shortcomings, so perfect were they in every other particular.

What are the causes of non-descent?

Mostly mechanical. Either the testicle is too large to pass or the rings abnormally small. The gubernacula might be wanting, or as Curling suggests, the cremaster spasmodically contracted, paralysed, or undeveloped. Peritoneal bands may intercept, or, finally, the truss cut off the avenue to the scrotum. Rosenmerkel, Mayo and Curling find no shortening of the vas deferens to account for the deformity. Interesting cases of temporary absence of testicles are noted where from violent colic, fever, or blow, both testicles have been drawn up the inguinal canal and kept there until the exciting cause has been removed, while it is not by any means uncommon to find new-born males whose testes do not appear until varying times up to one year after birth. The Hungarian children are spoken of as abnormally slow in this regard.

It would take too much of the Society's time if we discussed the varied conditions in which the testicle is found when not descended. One can run the gamut from a normal gland to none at all, and find authorities for each stage. Suffice it to say, that M. Cloquet found the left testis situated within the abdomen, the same size and as well formed as the right situated in the scrotum. Mr. Curling, examining a specimen from the above mentioned apprentice of Sir Astley Cooper, finds both within the abdomen close to the internal rings, appearing to be nearly, if not quite, the natural size, and stated to contain semen. Dr. Bright finds a testicle in the abdomen smaller than natural; but ducts and secreting structure quite perfect. M. Cloquet finds a testicle in the left inguinal canal so small at forty years of age as not to be felt, flattened, elongated, and in a state of atrophy.

Thus one might continue *ad infinitum*, without been able to elicit one general law, except this a priori, and, I think, a posteriori rule, *i.e.*, testicles retained in the abdomen, *ceteris paribus*, have a better chance for health and natural function than when in the narrow confines of the inguinal canal, exposed as they are



there, not only to blows, pressure from abdominal walls, constriction from belts, or what is worse for them, the misapplied truss, whose injudicious pressure prevents their natural function, and is probably the starting point of those malignant troubles that so often attack the testicle in this position.

There is one point in favor of the inguinal locality that is not forthcoming in cryptorchids whose testicles remain within the abdomen, and that is their subjective influence. The man who finds his scrotum empty is likely to be much better satisfied if he can trace his testicles out a little higher up in the canal than he who finds no evidence of them at all, and it is really begging the question to appease a cryptorchid's anxiety when he is told that his testicles are better in the abdomen than in sight, unless there are other means of proving to him that he possesses them anywhere.

Interesting as the etiology and pathology of these curious deformities may be, there is another question that, from a practical standpoint, far outweighs them, and that is, are cryptorchids sterile. Right here must be drawn the distinction between sterility and impotence.

Impotence is defined by Taylor as "Incapacity for sexual intercourse," and we have too numerous witnesses to think for a moment that cryptorchids are impotent. On the contrary, as our table will show, they are sometimes Lotharios, and outstrip in woman's estimation their better formed comrades. Sterility means inability to reproduce. With our present belief in the importance of the spermatozoa as factors of generation, we may lay aside that class of cryptorchids, or, as they are better termed, anorchids, who on dissection present no trace of testicle. These, fortunately for humanity, are very rare. Gruber has collected eight cases where this total absence of testicle was demonstrated by post-mortem examination.

Cabrol, quoted by Geoff. St. Hilaire, is reported to have found in a soldier, hung for rape, an absence of testicles within and without, but whose semen filling the seminal vesicles contained spermatozoa. In the next sentence the author laughs him to scorn—a derision that the scientific researches of the present

tend to reecho. Spermatozoa have been found days and weeks after castration capable of impregnating. Here the spring had ceased to flow, but the reservoirs were not yet empty.

Comparative anatomy does not tell us that cryptorchids are necessarily sterile. We see animals with testicles normally in their belly creating after their kind, as the cetacea and elephant. Others find their natural habitat in the inguinal canals, as the rhinoceros and Sumatran tapir. Others again, in the perineum, as in civets. Some bring their testicles to the fore, either in the canal or to the rings, when there is a call for them during the rutting season, as in some rodents, so there would seem no *sine qua-non* condition in the scrotum; yet it has been found that among animals whose testicles belong in the scrotum the cryptorchids are usually sterile.

Of whatever privileges the misplaced testicle may be deprived, there is no doubt that it can endure all the ills that its normal brother suffers. Epididymitis, orchitis, malignant growths, have been found existing in the retained gland, while some authors go so far as to claim that the position in the canal, exposed as it is to pressure and traumatism, is a prolific cause of sarcoma. Though I have no intention of wearying the reader with authorities or numerical deductions, I would present some results arising from the analysis of eighty-nine cases that I have been able to collect, mostly by means of the kindness and attention of Dr. Billings and his assistants in that invaluable library at Washington:



# TABLE OF CASES.

No.	Age.	Position of Testicles.	Reporter.	Fecundity.	Remarks.
1	Adult.	In abdomen.	Dr. Marshall, Hints to Young Med. Officers in Army.	Not noted.	Never had appeared.
2	Adult.	"	Dr. Hunter.	Virile. [been found.	Passions of a man.
3	Adult.	" near int. ring.	Sir Astley Cooper.	Semen said to have	Committed Suicide.
4	Adult.	"	Mr. Wilson, Lect. on. Urin. and Gent. Organs, p. 408.	No desire.	Manly appearance.
5	8 years	"	Mr. Curling on Testis, p. 106, Goddard.	Not noted.	Hernia on right side.
6	25 years	"	Mr. Partridge, Communications to Pathol. Soc.	"	
7	Adult.	"	Mr. Partridge, Lancet, Jan., 1860, p. 66.	No sperm found.	
8	Adult.	"	Mr. Curling, Med. Times and Gazette, Feb. 23, 1861.	"	
9	30 years	"	Mr. Cock, Taylor's Med. Jurisp. Reese, p. 686.	"	
10	Adult.	"	"	Children.	Twice married.
11	20 years	"	Mr. Poland, Guy's Hosp. Report, 1843, vol. i, p. 163.	Virile.	[No scrotum.
12	32 years	"	Taylor's Med. Jurisp., Reese, p. 686.	Children.	Twice married; hernia;
13	Adult.	In inguinal canal.	Mr. Curling, Taylor's Med. Jurisp., 687.	Two children.	No scrotum. [sodomy.
14	14 years	"	Caspar, Germ. Med., vol. ii, p. 187.	One son.	Found 2 weeks after
15	10 years	In abdomen.	Carpenter's Physiol., Smith, p. 948.	Sperm on shirt.	Descended later.
16	45 years	Wanting on post-mort.	Amer. Journ. Med. Sci., vol. xxiii, p. 352.	Not noted.	
17	14 years	In ing. canals.	West. Journ. Med. and Surgery, vol. iii, p. 352.	Sterile.	
18	Boy.	"	"	Not noted.	
19	35 years	I in abdom. I in canal	Wilson Lecture, loc. cit., p. 408.	Children.	Married. [sect.
20	Adult.	In abdomen.	Good, Study of Med., vol. v., p. 7.	Impotent.	Faulty develop. on dis-
21	Adult.	"	"	Not noted.	
22	Adult.	Absent on dissect.	Alphabet. Anat., Lyon, 1614, 4, Obs. iii, p. 84. [Paris.	Virginitous.	
23	23 years	Never visible.	Itard de Riez, An viii, p. 293, mêm. de la Soc. Méd. d'emula	None.	Hung for rape.
24	11 years	Inguinal canal.	Henry Hume, Lancet, July 20, 1861.	Not noted.	Idiotic and effeminate.
25	Adult.	Not visible.	Gaz. des Hôpitaux, Jan. 20, 1874.	None.	Hernia on right side.
26	20 years	Inguinal canal.	Wien. Med. Woch., 1852, p. 285.	Undoubted.	Effeminate.
27	48 years	"	Smith, Clin. Soc. Trans., London, 1877, vol. x, p. 192.	None.	Effeminate. [noted.
28	Adult.	Not descended.	Mr. Coulson, Medico-Chirurg. Soc., 1859.	Not noted.	Married; children not
29	20 years	Inguinal canal.	Gonbaux & Follin, Gaz. Méd., Paris, iii Ser., 1856, p. 267	No sperm.	[Paré.
30	22 years	"	Virchow's Archives, 38 B., p. 144.	No spermat. found.	Dissected by Ambrose
31	Adult.	"	La Generation de l'Homme II, p. 13.	Full of spermat.	Had numerous family.
32	Adult.	In abdomen.	Riolan Anthropographia Parisiis, 1626, lib. II, p. 251.	Virile, children.	



No	Age.	Position of Testicles,	Reporter.	Fecundity.	Remarks.
33	25 years	Cryptorchid.	Theat. Anat., Basil, MDCXIII, p. 94.	Not noted.	Voluptuous.
34	30 years	In abdomen.	Regnier de Graaf, de viror. Organ, Gener. 1585, t. i, p. 399.	"	Voluptuous.
35	20 years	Crypto child.	Diemerbroek, Anat., Lib. i Lyon, 1595, Cap. 22, p. 240.	"	"More than dollars."
36	Adult.	"	"	Children.	Appeared after high fever.
37	17 years	"	T. Kerkringius, Specileg. Anat. Obs. 13 p. 35.	Not noted.	Descended later.
38	Infant.	Below pubis.	Linnee Med. An. 1700, mens. Jul. obs. 26, p. 826.	"	[on Test.
39	Twin	} Cryptorchid.	{ Curat. Empis. Rothmag. M. D., C. L.	"	Ascended after a blow
40	Infants.	"	{ Cent. V. Curat xcii, p. 358. [lib. i, obs. 29, p. 95.	"	Hermaphrodite.
41	60 years	"	Johannes Wolfius, Obs. Chir. Med. Qued limburgi 1704	"	Son of Monorchid.
42	"	Inguinal canal.	Ruysch, Heintz, Roonhuys, Obs. 16, p. 64.	"	Voluptuous. [of age.
43	Child.	Cryptorchid.	M. F. Lochnerius, Ephem. Acad. Nat. Cur. An. i, Obs.	"	A Lothario.
44	Infant.	"	Martin Scharig, Spermatologia, p. 62. [191 p. 418.	"	Married taken for a wo-
45	22 years	In abdomen.	"	Supposed sterility.	man until age of 17.
46	Adult.	In inguinal canal.	Arnaud, Mem. de Chirurg. London 1768, t. I, p. 174.	No children.	
47	17 years	Cryptorchid.	Desgarnettes, Jour. de Med. Juillet, 1791.	Not mentioned.	
48	"	In abdomen.	M. Conte, Bul. de la Soc. Anatom. 1841, vol. xvi, p. 265.	"	
49	40 years	L. in canal. R. wanting	M. Deville, Bul. de la Soc. Anat. 1841, vol. xvi, p. 32.	"	
50	Adult.	Inguinal canal	M. Cruveilhier, l'Anatom. Pathol. t. 111, p. 246.	"	Hern. left side.
51	18 mos.	In abdomen.	M. Cruveilhier, l'Anat. Pathol. t. i, p. 301.	"	Kid. sup renal cap. uni-
52	36 years	I in canal, I in abdom.	M. Pétrequin, Anat. Chirurg. Paris 1844, p. 374.	"	ted in m. l. inside abd.
53	34 years	In abdomen.	M. Verdier, Traité des Hernies, Paris 1840, p. 446.	Children.	Test. appeared after
54	32 years	"	Roubaud, Traité de l'impuissan, et de la Sterilité, Paris. 1855, t. 11, p. 613.	"	an effort.
55	22 years	Inguinal canal.	M. M. Follin and Goubaux, Mem. de la Soc. de Biologie. [1855, p. 303.	No sperm. found.	[left side.
56	50 years	"	M. Godard Etudes sur le Monor. and Cryptor. p. 125.	"	Strangulated hernia on
57	30 years	"	Godard, loc. cit. p. 127.	"	Hernia. No scrotum.
58	Adult.	Cryptorchid.	"	Not mentioned.	
59	33 years	"	"	"	Married 10 years.
60	"	"	"	"	
61	55 years	"	"	"	
62	24 years	In abdomen.	"	"	

TABLE OF CASES (CONTINUED).

No.	Age.	Position of Testicles.	Reporter.	Fecundity.	Remarks.
63	Adult.	In iliac Fosse	Godard, loc. cit., p. 129.	Not mentioned.	
64	"	"	" " " p. 129.	"	
65	8 years	1 in canal, 1 in abdo'n	" " " p. 129.	"	Hernia on right side.
66	Adult.	R. in abdo'n, l. in canal	" " " p. 130.	"	Voluptuous.
67	45 years	Inguinal canal.	" " " p. 131.	"	[inate.
68	24 years	"	" " " p. 132.	"	Voluptuous but effem.
69	5 years	R. in canal, l. in abdo'n	" " " p. 132.	Impotent.	
70	17 years	None apparent.	" " " p. 133.	No sperm found.	
71	Adult.	Inguinal canal.	" " " p. 143.	Has two children.	
72	26 years	Cryptorchid.	" " " p. 143.	No children.	[band.
73	Adult.	"	" " " p. 145.	Wife has children.	Separated from hus-
74	Adult.	"	" " " p. 146.	No children.	
75	33 years	"	" " " p. 146.	"	
76	55 years	"	" " " p. 147.	No sperm found.	Effeminate.
77	22 years	R. in il. fos. l. in canal	" " " p. 147.	"	Hypochondriac.
78	24 years	In abdomen.	Commer. litter Ann., 1732, Novimbergae 4, Hebd. 2, 9, Jan. 1732, p. 10, No. 5.		
79	Child.	Absent on post-mort'm	Archiv. f. med. Erfahrung, V. E. Horn, B. 1 Leipsig, 1801, S. 349.		
80	8 days	"	J. L. Caspar, Wochenschn. f. d. gesamte, Heilk, Berlin, 1801, S. 848.		
81	½ hour	"	Gaz. Med. Paris, 1859, 4, No. 41, p. 650.		
82	Infant	"	Godard, Recherches, Teratologiques p. 84, pl. v-vi.		
83	61 years	"	Handbuch d. Pathol. Anat. B. I. Leipsig 1812, S. 685.	Liquid in vas. def. full of epithel. and gran. bod's, Effem. Volupt.	Attempted to commit suicide.
84	Fœtus	"		No ejection.	Repudiates child,
85	25 years	None discovered.	Gruber, Wien. Med. Jahrbuch, B. xv. 1868.	Not noted.	Had emissions.
86	Child	In Abdomen.	Little, Med. News, Mar. 3, '83, p. 254.	No sperm found.	Test, size of almonds.
87	Adult.	Cryptorchid.	Keys, Med. Times, Mar. 3, '83, p. 256.	"	Report of a child; manly
88	38 years	In abdomen.	Osler, Montreal Gen. Hosp. Reports, '80-'81, p. 335.	"	hernia on right side.
89	33 years	Sometimes in abdom'n	R. W. Johnson.	"	
		Sometimes in canal.			

Total number of cases, 89.

Number of cases over 14 years of age, 66.

Number of cases with no testicles on post-mortem, 8.

Number of cases where both testicles may have been retained in abdomen, uncertain.

Number of cases where both testicles are stated as being in inguinal canal, 18.

Number of cases where only one testicle in canal, other not appearing, 8.

Number of cases where semen examined microscopically, 16.

Number of cases where spermat were discovered in sperm, 3.

One, No. 14, is very dubious, having been found two weeks after sodomy on boy's shirt. The other No. 30 is reported full of spermat. Lastly Cooper's apprentice No. 3 is stated to have spermat in seminal fluid.

Number of cases mentioned as having children, 10.

Hereditary remarked in one case No. 43 where a monorchid brings forth a cryptorchid child.

Some are found effeminate, others manly, some hairy, others beardless, some with other deformities, others deficient only in this one respect. The morbid, the hypochondriacs, the voluptuous, and imbecile, all find a place, and while we cannot in the face of the above reports, believed to be accurate, take up the parable of Godard, who says: "We have shown that men affected with this vice of conformation are sterile and ejaculate a fluid deprived of spermatozoa," still we are compelled to say that there are heavy odds against the fecundity of human cryptorchids—a decision which must be verified by diligent microscopic examination of the semen.

We now come to the consideration of my own case. I feel sure that should I invite the most acute genito-urinary specialist to this room and request him to select the cryptorchid, my man would escape, unless, like Joan of Arc, he, the specialist, was gifted with second sight.

A. T., *et.* 33 years, a sailor, native of Virginia, applied at the United States Marine Hospital office for a truss, presenting the following history:



No hereditary taint. Mother noticed his empty scrotum as an infant, a condition that has continued to the present. From his youth up has been most lascivious, obtaining what he considered an enviable reputation for *amours* among his companions. Was once sued on the charge of bastardy, but compromised the case for five hundred dollars. Has been married twice, with one child by his first wife, said to have resembled his father. Four years ago had gonorrhoea, followed by an apparent orchitis in his right testicle. Three years ago, while swaying up a sail, a compound motion, felt something give way on his right side, accompanied by pain. Applied a double truss two weeks after, which gave rise to orchitic pain at first. The hernia on the right side is stated to have sometimes descended into the scrotum, leaving the testicle, however in its rear.

PHYSICAL EXAMINATION.—Find the man well developed. Thick suit of hair on head, body, face, pubis. Height nearly six feet; broad shouldered; strong; voice bass; breasts masculine; penis larger than the average, with no hypospadias; scrotum smaller than usual; dartos contractile; median raphe normal; perineum normal. The scrotum is absolutely empty on the left side. On the right there seems to be a glove finger-like bag projecting about half way into the scrotum from the groin—apparently the sac of a hernia. On examination in the recumbent position nothing like a testicle can be felt in either canal, they having retired into the belly, together with the enterocele on the right side. Making the patient stand and cough brings down the hernia on the right side, and it may be possible to persuade the testicles to leave the belly, but not always. In several examinations, I failed to get them down in spite of cough, strain and exertion. When down, they appear slightly smaller than the natural size, though I have only examined them once—his first visit. On all subsequent visits they refused to appear.

EXAMINATION OF SEMEN.—The semen abnormally thin in consistency, different in odor, and in general appearance too translucent, contains no spermatozoa, but numerous granular bodies, epithelium and crystals. This would indicate that the motion in the scrotum is not enough, as was formerly thought, to generate

spermatozoa, for here the back and forth moving from abdomen to canal fails to produce them, even when all other masculine attributes are present.

One word more, and that a practical one.

THE TREATMENT OF CRYPTORCHIDS.—Should the testicles remain in the abdomen, we can do nothing, never despairing of their descent in children up to one year of age.

When in the canals, in children, gentle and moderate taxis, used often rather than long, may gradually draw them into the scrotum. If this be found impossible, return them into the abdomen and retain them there by a truss. Should they be fixed in the inguinal canals, protect them by a concave horse-shoe pad from all external violence, and relieve the strain on the gland with an abdominal support.

Remember that the inguinal canals rank below the scrotum groin and abdominal cavity in point of election for a permanent home for an otherwise healthy testicle, both because of its narrow confines and the liability of an accompanying hernia, as well as its exposure to traumatism.

Finally, in the moral treatment of cryptorchids, never voluntarily, unless pressed by direct questioning or as a duty to one's neighbor, tell those thus afflicted that they are deprived of the possibilities of paternity.







